

ipd1200mdbmanipTES-10

**Defense Information Infrastructure (DII)
Common Operating Environment (COE)**

**Installation Procedures (IP)
for the
METOC Database Manager (MDBMAN) Segment
of the
Tactical Environmental Support System Next Century
[TESS(NC)]
Meteorology and Oceanography (METOC) Database**

Document Version 1.2

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**Prepared for:
Naval Research Laboratory
Marine Meteorology Division
Monterey, CA**

**Prepared by:
Integrated Performance Decisions
Middletown, RI**

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1 SCOPE

1.1 Identification

These Installation Procedures (IP) describe the installation of the Meteorology and Oceanography (METOC) Database Manager (MDBMAN) segment, Version 1.2 series, of the Tactical Environmental Support System Next Century [TESS(NC)] METOC Database. The MDBMAN segment provides the ability to purge and archive various types of METOC data from the database. In addition, the segment allows for METOC data archived to a tape or hard disk to be retrieved and restored into the database. This software is designed to run under the Defense Information Infrastructure (DII) Common Operating Environment (COE), release 3.1, on a Hewlett-Packard computer running HP-UX 10.20 or a personal computer running the Microsoft Windows NT 4.0 operating system with Service Pack 3.

1.2 System Overview

The software described in this document forms a portion of the METOC Database component of the TESS(NC) Program (Navy Integrated Tactical Environmental Subsystem (NITES) Version I). On 29 October 1996, the Oceanographer of the Navy issued a TESS Program Policy statement in letter 3140 Serial 961/6U570953, modifying the Program by calling for five seamless software versions that are DII COE compliant, preferably to level 5.

The five versions are:

- NITES Version I The local data fusion center and principal METOC analysis and forecast system (TESS(NC))
- NITES Version II The subsystem on the Joint Maritime Command Information System (JMCIS) or Global Command and Control System (GCCS) (NITES/Joint METOC Segment (JMS))
- NITES Version III The unclassified aviation forecast, briefing and display subsystem tailored to Naval METOC shore activities (currently satisfied by the Meteorological Integrated Data Display System (MIDDS))
- NITES Version IV The Portable subsystem composed of independent PCs/workstations and modules for forecaster, satellite, communications, and Integrated Command, Control, Communications, Computer, and Intelligence Surveillance Reconnaissance (IC4ISR) functions (currently the Interim Mobile Oceanographic Support System (IMOSS))
- NITES Version V Foreign Military Sales (currently satisfied by the Allied Environmental Support System (AESS))

NITES I acquires and assimilates various METOC data for use by US Navy and Marine Corps weather forecasters and tactical planners. NITES I provides these users with METOC data, products, and applications necessary to support the warfighter in tactical operations and decision making. NITES I provides METOC data and products to NITES I and II applications, as well as non-TESS(NC) systems requiring METOC data, in a heterogeneous, networked computing environment.

The TESS(NC) Concept of Operations and system architecture require that the METOC Database be distributed both in terms of application access to METOC data and products and in terms of physical location of the data repositories. The organizational structure of the database is influenced by these requirements, and the components of this distributed database are described below.

In accordance with DII COE database concepts, the METOC Database is composed of six DII COE-compliant *shared database* segments. Associated with each shared database segment is an Application Program Interface (API) segment. MDBMAN interfaces with both the API and Database segments on the client/server platform as follows:

<u>Data Type</u>	<u>Data Segment</u>	<u>API Segment</u>
Grid Fields	MDGRID	MAGRID
Latitude-Longitude-Time (LLT) Observations	MDLLT	MALLT
Textual Observations and Bulletins	MDTXT	MATXT
Remotely Sensed Data	MDREM	MAREM
Imagery	MDIMG	MAIMG
Climatology Data	MDCLIM	MACLIM

A typical client-server installation is depicted in Figure 1-1 on the next page. This shows the shared database segments residing on a DII COE database server, with a NITES I or II client machine hosting the API segments. The MDBMAN segment will interface directly with the server platform. Communication between API segments and shared database segments is accomplished over the network using ANSI-standard Structured Query Language (SQL).

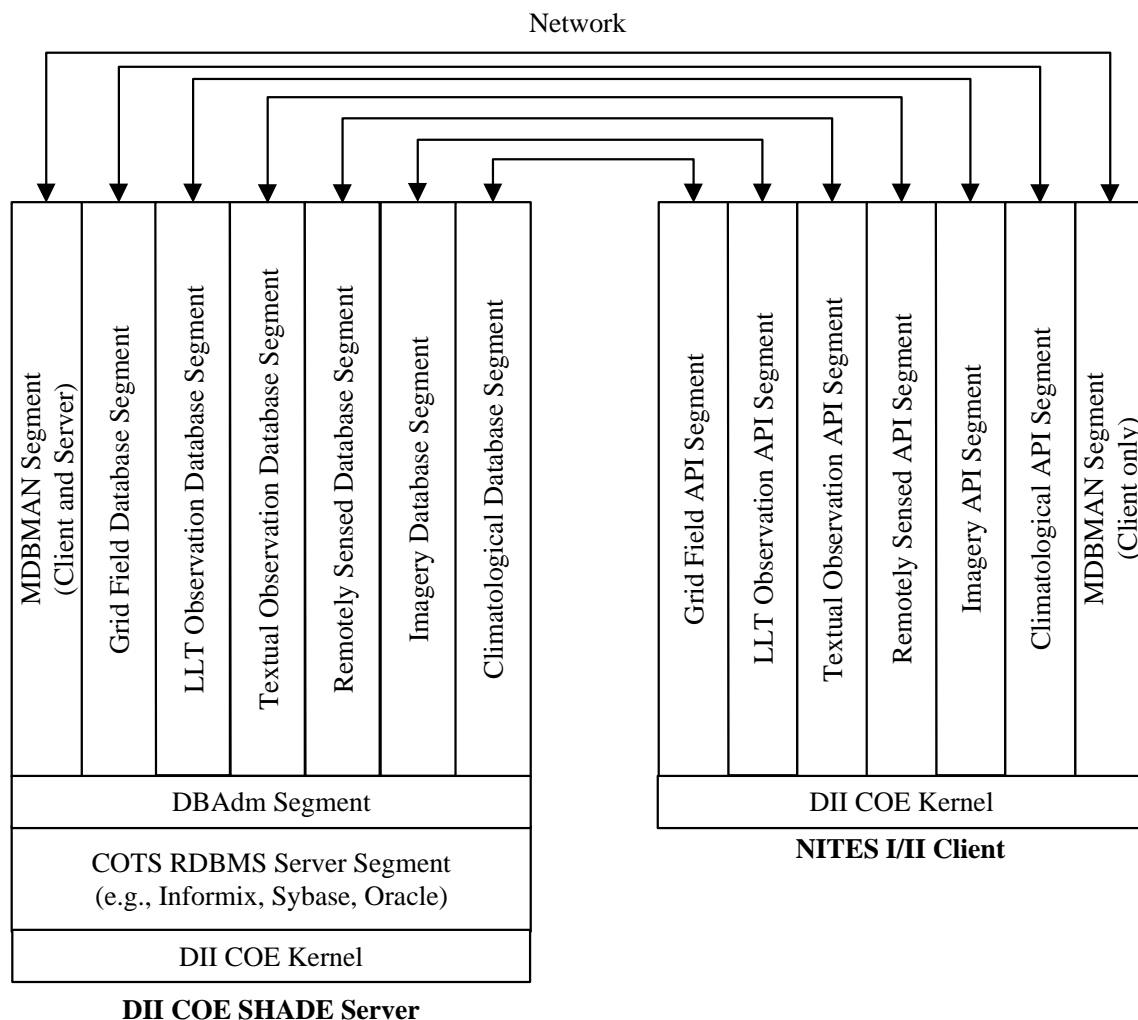


Figure 1-1. TESS(NC) METOC Database Conceptual Organization

The MDBMAN segment interfaces directly with the API and database segments provided on the database server machine. The MDBMAN windows and screens provide easy operation for the user to purge and archive various types of METOC data from the database and retrieve data that have been previously archived to a tape or other media. This interface is easily accessible through logging in as DBAdmin on the TAC-3/TAC-4 Systems, or through the Program's menu on the PC Windows NT/4.0 system.

2 REFERENCED DOCUMENTS

2.1 Government Documents

STANDARDS

MIL-STD-498 *Software Development and Documentation*
5 December 1994

SPECIFICATIONS

Unnumbered *Performance Specification (PS) for the Tactical Environmental Support System/Next Century TESS(3)/NC (AN/UMK-3)*
5 December 1997

Unnumbered *Software Requirements Specification for the Tactical Environmental Support System/Next Century [TESS(3)/NC] Meteorological and Oceanographic (METOC) Database, Space and Naval Warfare Systems Command, Environmental Systems Program Office (SPAWAR PMW-185), Washington, DC*
30 September 1997

OTHER DOCUMENTS

Unnumbered *Database Design Description for the Tactical Environmental Support System/Next Century [TESS(3)/NC] Meteorological and Oceanographic (METOC) Database, Space and Naval Warfare Systems Command, Environmental Systems Program Office (SPAWAR PMW-185), Washington, DC*
30 September 1997

DII.COE.DocReqs-5 *Defense Information Infrastructure (DII) Common Operating Environment (COE) Developer Documentation Requirements, Version 1.0*
29 April 1997

ipd1000mdbmansrsTES-10 *Software Requirements Specification (SRS) for the METOC Database Manager (MDBMAN) Segment of the Tactical Environmental Support System Next Century [TESS(NC)] Meteorology and Oceanography (METOC) Database*
23 October 1998

ipd1200mdbmansumTES-10 23 October 1998	<i>Software User's Manual (SUM) for the METOC Database Manager (MDBMAN) Segment of the Tactical Environmental Support System Next Century [TESS(NC)] Meteorology and Oceanography (METOC) Database</i>
ipd1300mdbmansvdTES-10 23 October 1998	<i>Software Version Description (SVD) for the METOC Database Manager (MDBMAN) Segment of the Tactical Environmental Support System Next Century [TESS(NC)] Meteorology and Oceanography (METOC) Database</i>
DII.COE31.HP10.20.CIP 23 May 1997	<i>DII COE V3.1 HP 10.20 Consolidated Installation Procedures</i>
DII.3010.HP1020.KernelP1.IG-1 9 May 1997	<i>DII COE Kernel 3.0.1.0P1 Patch 1 for HP-UX 10.20 Installation Guide</i>
DII.3010.HP1020.KernelP2.IG-1 30 July 1997	<i>DII COE Kernel 3.0.1.0P2 Patch 2 for HP-UX 10.20 Installation Guide</i>
DII.3010.HP1020.KernelP3.IG-1 08 August 1997	<i>DII COE Kernel 3.0.1.0P3 Patch 3 for HP-UX 10.20 Installation Guide</i>
DII.3010.HP1020.KernelP4.IG-1 27 August 1997	<i>DII COE Kernel 3.0.1.0P4 Patch 4 for HP-UX 10.20 Installation Guide</i>

2.2 Non-Government Documents

None.

3 SYSTEM ENVIRONMENT

3.1 System Requirements

3.1.1 Hardware Requirements

The MDBMAN segment is hosted on the following hardware:

- Tactical Advanced Computer, TAC-3 (HP 750/755)/TAC-4 (HP J210)
- IBM-Compatible Personal Computer (PC)

The following configurations are recommended:

- TAC-3/TAC-4: RAM: 128 MB minimum, 192 MB optimum
Disk Space: 2 GB
Swap Space: 300 MB
- PC: RAM: 32 MB minimum, 128 MB optimum
Disk Space: 2 GB

3.1.2 Operating System Requirements

- TAC-3/TAC-4: HP-UX 10.20
- PC: Windows NT 4.0 with Service Pack 3

3.1.3 Kernel Requirements

- TAC-3/TAC-4: Kernel 3.0.1.0 with patches through P4
- PC: N/A

3.2 System and Site Preparations

3.2.1 System Configuration

The following software must be properly installed prior to loading the MDBMAN segment:

- Appropriate operating system (as described above),

TAC-3/TAC-4:

- Appropriate DII COE Kernel (as described above),
- DII COE Informix Connect segment (INFXCN), version 1.0.1.0/7.22
- Informix DB Server, version 1.0.0.0

- METOC Grid Field API/DB segments, version 4.2 series
- METOC Textual Obs API/DB segments, version 4.2 series/version 4.1.2 series
- METOC LLT Obs API/DB segment, version 4.2 series/version 4.3 series
- METOC Imagery API/DB segment, version 4.2 series/version 4.1.1 series
- JAVART (JAVA Run-Time) segment, version 1.0.0.0 (Installation is discussed in Section 4)
- JMudd (JAVA Native Interface Code Generator), version 1.0.0.0

Windows NT:

- JAVART segment, version 1.0.0.0.

All installed METOC APIs use the following environment variables related to the Informix installation:

- `INFORMIXSERVER` Identifies the Informix server, typically set to `online_coe`
- `INFORMIXDIR` Path to the Informix software, typically `/opt/informix`

The path specified in the `INFORMIXDIR` variable should also be included in the system's `PATH` variable.

3.2.2 Operating System Preparation

Information needed to prepare the operating system is found in these documents:

TAC-3/TAC-4:

- DII COE V3.1 HP 10.20 Consolidated Installation Procedures
- DII COE Kernel 3.0.1.0P1 Patch 1 for HP-UX 10.20 Installation Guide
- DII COE Kernel 3.0.1.0P2 Patch 2 for HP-UX 10.20 Installation Guide
- DII COE Kernel 3.0.1.0P3 Patch 3 for HP-UX 10.20 Installation Guide
- DII COE Kernel 3.0.1.0P4 Patch 4 for HP-UX 10.20 Installation Guide

Windows NT:

- Windows NT 4.0 with Service Pack 3

3.2.3 Tape/Disk Preparation

The MDBMAN, JAVART 1.0.0.0, and JMudd 1.0.0.0 segment software is delivered as follows:

- 4 mm DAT cartridge for the TAC-3/TAC-4 hardware environment
- 3.5" high-density floppy disk(s) or a CD-ROM for the PC hardware environment (MDBMAN and JAVART only)

4 INSTALLATION INSTRUCTIONS

MDBMAN is a component of a DII COE database system. The following procedures describe the installation of the MDBMAN software.

4.1 Installation on TAC-3/TAC-4 Systems

4.1.1 Media Booting Procedures for TAC-3/TAC-4 Systems

To prepare a tape for installation:

1. Insert the tape in the DAT drive.
2. Log in as sysadmin.
3. Select the System Administration SEGMENT INSTALLER utility under the **Software** pull-down menu.
4. Select the source and click the **Read Contents** button. The contents of the tape appear in the SELECT SOFTWARE TO INSTALL portion of the SEGMENT INSTALLER window.

4.1.2 Installation Procedures for TAC-3/TAC-4 Systems

(Note: Prior to segment installation, ensure that no existing MDBMAN segment is installed on the target platform. If so, select the MDBMAN segment in the CURRENTLY INSTALLED SEGMENTS section of the window. Select the **Deinstall** button and follow the instructions on the screen to remove the MDBMAN segment. Follow the same procedures to remove the JAVART or JMudd segments.)

To install the MDBMAN software:

1. First ensure that the operating system (OS) and Kernel, with all patches, are installed. Instructions for installing the OS, Kernel, and patches are contained in the HP-UX documentation cited in Section 3.2.2.
2. Install the JAVART 1.0.0.0 segment from the installation tape.
 - Highlight **JAVA Run-Time Segment 1.0.0.0**.
 - Click the Install button.
3. The INSTALL STATUS dialog box will appear, which will give software loading status in a % format.

4. Once the installation is complete, the SEGMENT INSTALLER window will appear. The **JAVA Run-Time Segment 1.0.0.0** will be displayed in the CURRENTLY INSTALLED SEGMENTS section of the window.
5. Install the JMudd segment 1.0.0.0 from the installation tape.
 - Highlight **JMudd Segment 1.0.0.0**.
 - Click the **Install** button.
6. The INSTALL STATUS dialog box will appear, which will give software loading status in a % format.
7. Once the installation is complete, the SEGMENT INSTALLER window will appear. The **JMudd Segment 1.0.0.0** will be displayed in the CURRENTLY INSTALLED SEGMENTS section of the window.
8. Install the MDBMAN segment from the installation tape.
 - Highlight **METOC Database Manager Segment**.
 - Click the **Install** button.
9. The INSTALL STATUS dialog box will appear, which will give software loading status in a % format.
10. Once the installation is complete, the SEGMENT INSTALLER window will appear. The **METOC Database Manager Segment** will be displayed in the CURRENTLY INSTALLED SEGMENTS section of the window.

4.1.3 Post Installation on TAC-3/TAC-4 Systems

1. Log in as sysadmin.
2. From the title bar menu, select **Hardware** followed by **Reboot System**. A dialog box will appear to confirm the reboot process. Press the **OK** button to continue the sequence.
3. After system reboot, log in as DBAdmin.
4. From the title bar menu, select **Database Control** followed by **Server Control**.
5. The Server Control Dialog will appear. Verify that the server is “Up.” If not, select the **Start Server** button. The dialog should display that the server is “Up” and the shutdown mode is “Normal.”
6. Select the **Cancel** button to close the Server Control Dialog.
7. To start the MDBMAN user interface, select **MDBMAN** followed by **METOC Database Manager** from the title bar menu.

4.2 Installation on Windows NT Systems

4.2.1 Media Booting Procedures for Windows NT Systems

1. Insert floppy disk #1 containing the JAVART 1.0.0.0 software into the disk drive (or insert the CD-ROM disk, if provided). The InstallShield process will prompt the user for the remaining floppy disks as needed.
2. Click on the **Start** button at the lower left side of the screen.
3. Click on **Settings**.
4. Click on **Control Panel**.
5. Click on **Add/Remove Programs**.
6. Ensure the **Install/Uninstall** tab is selected and click on the **Install** button. (Note: Prior to segment installation, ensure that no existing JAVART 1.0.0.0 segment is installed on the target platform. If so, select the JAVART 1.0.0.0 segment in the list provided on the window. Select the **Add/Remove** button and confirm the removal of the JAVART segment.)
7. Click on the **Next** button.
8. The Command Line box in the next dialog should show `A:\SETUP.EXE`. If it does, click the **Finish** button to commence installation.
9. Continue with the installation of the MDBMAN segment by following steps 1-8 described above.

4.2.2 Installation on Windows NT Systems

The InstallShield installation program will assist you in performing the installation.

1. Upon execution of the `setup` file, a Welcome window will appear to start the installation process. Click on the **Next** button.
2. A Choose Destination window will appear, select the **Next** button to accept the default (\h) settings. Follow the directions as described on the JAVART or MDBMAN Installation window. Insert the remaining disks (not required if using a CD-ROM) as requested and confirm by selecting **OK** in the Setup Needs The Next Disk dialog box.
3. At the final window, click on the **Finish** button, and close any windows that remain open.
4. To start the MDBMAN interface, select the **Start** button (lower left corner), then **Programs**, and finally **MDBMAN**.

4.3 Installation of Upgrades

Installation of upgrades will generally follow the same procedures listed above.

4.4 Installation Verification

All successfully installed segments are listed in the CURRENTLY INSTALLED SEGMENTS portion of the INSTALLER window on TAC-3/TAC-4 systems. For Windows NT systems, the Windows NT Add/Remove Programs under the Control Panel can be used to verify the presence of the software in the directories to which it was installed.

4.5 Initializing the Software

This section is tailored out. No initialization of the software is required.

4.6 List of Changes and Enhancements

This section is tailored out.

4.7 Important Considerations

This section is tailored out.

5 NOTES

5.1 Glossary of Acronyms

AESS	Allied Environmental Support System
API	Application Program Interface
COE	Common Operating Environment
DII	Defense Information Infrastructure
GCCS	Global Command and Control System
IC4ISR	Integrated Command, Control, Communications, Computer, and Intelligence Surveillance Reconnaissance
IMOSS	Interim Mobil Oceanographic Support System
INFXCN	Informix Connect Segment
IP	Installation Procedures
JAVART	JAVA Run-Time Segment
JMCIS	Joint Maritime Command Information System
JMS	Joint METOC Segment
JMudd	JAVA Native Interface Code Generator Segment
LLT	Latitude-Longitude-Time
MDBMAN	METOC Database Manager Segment of the TESS(NC) METOC Database
METOC	Meteorology and Oceanography
MIDDS	Meteorological Integrated Data Display System
NITES	Navy Integrated Tactical Environmental Subsystem
OS	Operating System
PC	Personal Computer
PS	Performance Specification

SQL	Structured Query Language
SRS	Software Requirements Specification
SUM	Software User's Manual
SVD	Software Version Description
TESS(NC)	Tactical Environmental Support System Next Century